Ministry of Public Health of U. S. S. R. Kharkov N/I Institute of Vaccine and Serum City of Kharkov - Pushkin St. No. 14

AN ACUTE ENCEPHALOMYELITIS AND MULTIPLE SCLEROSIS

Application and Desage

The vaccine is applied sabdermally and intradermally. At the time of selection of the patients for the vaccine therapy a single cutis test is performed. For this purpose 0.2 ml. of the vaccine is introduced intradermally on the inner side of the foreshoulder. After 24-48 hours a local reaction is registered which manifests itself in reddening and swelling on the place of injection. The reaction is appraised in the following manner:

- l x l cm. Negative
- 2 x 2 cm. Doubtful
- 2 x 3 cm. Positive
- 4 x 5 cm. and more Acutely positive

The results of the reaction are registered accordingly in the case history and on a card which registers the effectiveness of the treatment. In the cases of patients who have good cutis reactions, the intradermal method of treatment produces a more favorable prognosis in regards to effectiveness than in the cases of negative cutis reaction. In the latter case it is better to assign the subdermal method of injection of the vaccine or to combine subdermal with the intradermal.

A. The Subdermal Method of Introduction of the Vaccine

The course of treatment consists of two cycles, six injections each

The dosage of the separate injections is as follows:

Order of Injections	Doue
First	2 ml.
Second	3 ml.
Third	Li mi.
Fourtn	5 ml.
Fifth	5 ml.
Sixth	5 mi.

The intervals between 1, 2, 3, and 4 injections are 3 days, between 4 and 5 -- 5 days, between 5 and 6 -- 7 days.

The second cycle is carried out after 10-14 days according to the same pattern but the dosage of each injection is the same -- 5 ml.

The Intradermal Method of Injection of Vaccine

The course of treatment consists of three cycles of seven injections each. The vaccine is introduced intradermally, 0.2 ml. at a time. The intervals between separate injections are the same as in the case of subdermal injection, however, they should be determined by the individual reaction of the patient. Every following injection can be done only after the local reaction of the previous one disappears. The intervals between the cycles are 10-14 days. If the condition of the patient is good the last cycle of injections can be carried out at a dispensary. If, during the period of treatment on the place of injection there will be no reaction in the shape, swelling and reddening, the prognosis of treatment is unfavorable. The repeated courses of treatment of both methods are carried out in 2.5 - 2 months. It is recommended in the

beginning of treatment to have not less than two courses carried out, and, in poorly yielding cases, three courses. In the case of multiple sclerosis a periodic repetition of treatment is necessary which is determined by the condition of the patient but which, on the average, is carried out once a year.

Instructions for Treatment

For the effectiveness of the treatment by vaccine instructions are given for the cases of multiple sclerosis in the initial stages of the disease. Those are preferred in which spastic occurrences are very weakly manifested. As initial stages are considered the patients in the clinical picture of which (?) are expressed lesional symptoms: symptom of Kernig, more seldem symptoms of Lasegue, disorders of sensibilities of lesional type in the form of hypesthesia, hyperesthesia or paresthesia. Bladder disorders are also considered as initial stages. The enumerated initial stages of multiple sclerosis are easily handled completely or partially by the treatment with the specific vaccine.

In the old cases of multiple sclerosis with sharply expressed spastic paresis of the lower extremities with the motor and spastic ataxia; with intentional tremer, treatment by the vaccine has a less favorable prognosis because in the course of time in the nervous system a number of irreversible affections arise which do not yield to the treatment.

The sharpening of the process, the appearance of new symptoms in the picture of multiple sclerculs such as, for example, oculemotor disturbances, hemiparesis, paraparesis are not an indication for discontinuance of the specific vaccine therapy.

The instructions for the treatment of acute and semiacute encephalomyelitis are limited only by time from the beginning of the disease. Acute encephalomyelitis can be treated by specific vaccine not earlier than 1-2 months after the beginning of the disease.

Counter Instructions for Vaccine Therapy

Inoculations are not to be done:

- (1) In the case of acute encephalomyelitis in an acute stage,
- (2) In the case of the following chronic diseases expressed in the form of neurosis nephritis, diabetes, tuberculosis, the non-compensated defects of the heart cachexia.
- (3) In the case of pregnancy and in the first period of breast feeding.

Length of Suitability of Vaccine and Its Storage

The length of time of fitness of the vaccine is 12 months from the day of its preparation. The vaccine must be stored in a dark place at the temperature of $2-0^\circ$ C.

On each ampulla with the vaccine a label should be placed with the exact name of the Institute which prepared the vaccine, number of the series, the quantity of vaccine in an ampulla, and, the length of fitness. Vaccine in damaged ampulla (those which changed their exterior), with unbreckable flakes, with foreign substances, subjected to many freezings, without the labels or with insufficient information of them, should not be used.

Before using, the vaccine should be shaken well. After shaking the vaccine should not contain anything except granulous agglomerations of brain tissue. The vaccine is sucked into a sterilized and well chilled syringe in order to avoid the coagulation of the proteins.

For each patient a separate needle is used.

The treatment by vaccine under stationary or dispensary conditions is permitted only under the observation of a specialist - a neuro-pathologist.